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DRAFT
REPORT ON THE
ERATIONS ANALYSIS PROGRAM
ND COUNTY OF SAN FRANCISCO

San Francisco, California

January, 1973

This report has been prepared jointly by the City and County of San Francisco and PAR Technology, Inc., a division of Booz, Allen & Hamilton Inc., pursuant to the terms of a grant (#72CA01) under the Intergovernmental Personnel Act of 1970.

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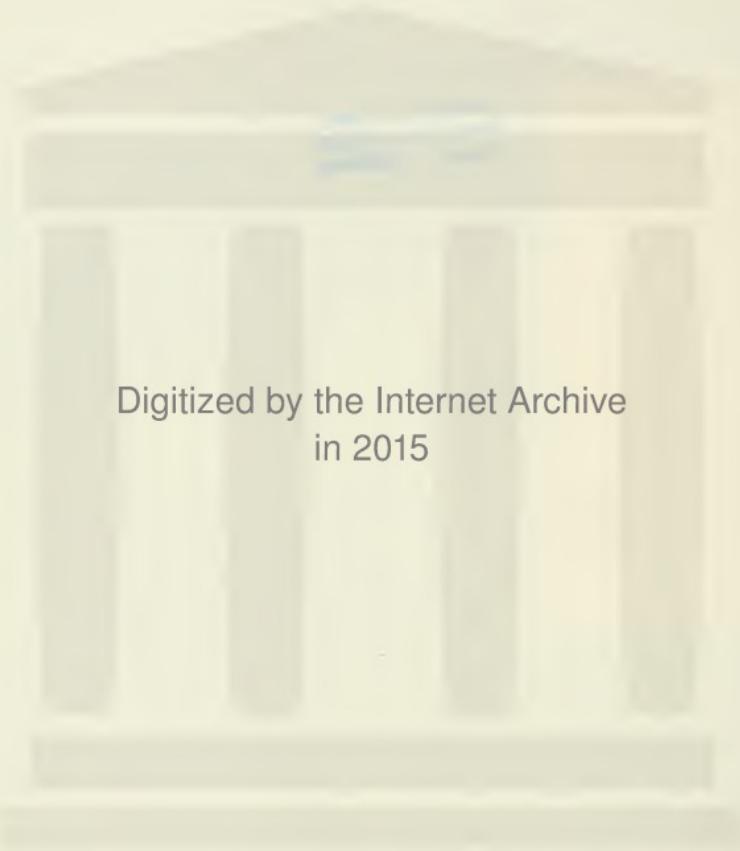
DRAFT

REPORT ON THE
OPERATIONS ANALYSIS PROGRAM

CITY AND COUNTY OF SAN FRANCISCO
San Francisco, California

January, 1973

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FOREWORD

The Operations Analysis Program described herein was conducted by the City and County of San Francisco in conjunction with PAR Technology, Inc., a subsidiary of Booz, Allen & Hamilton Inc. The program was funded by the Intergovernmental Personnel Act of 1970, Grant #72CA01.

The Intergovernmental Personnel Act of 1970 was established on the premise that public service at all levels of government can be improved through the development of personnel systems that are consistent with various merit principles. The merit principles, as described in Sec. 2 of the Intergovernmental Personnel Act of 1970, are outlined below and were used as a guide in the development and conduct of the Operations Analysis Program.

INTERGOVERNMENTAL PERSONNEL ACT OF 1970

- Merit Principles -

"Sec. 2. The Congress hereby finds and declares . . .

"That the quality of public service at all levels of government can be improved by the development of systems of personnel administration consistent with such merit principles as --

- (1) Recruiting, selecting, and advancing employees on the basis of their relative ability, knowledge, and skills, including open consideration of qualified applicants for initial appointment;
- (2) Providing equitable and adequate compensation;
- (3) Training employees, as needed, to assure high-quality performance;
- (4) Retaining employees on the basis of the adequacy of their performance, and separating employees whose inadequate performance cannot be corrected;
- (5) Assuring fair treatment of applicants and employees in all aspects of personnel administration without regard to political affiliation, race, color, national origin, sex, or religious creed and with proper regard for their privacy and constitutional rights as citizens; and
- (6) Assuring that employees are protected against coercion for partisan political purposes and are prohibited from using their official authority for the purpose of interfering with or affecting the result of an election or a nomination for office."

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LETTER OF TRANSMITTAL - TO BE
ADDED IN FINAL REPORT -

T A B L E O F C O N T E N T S

Page
Number

FOREWORD

LETTER OF TRANSMITTAL

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I. BACKGROUND AND PURPOSE

I. BACKGROUND AND PURPOSE

The various departments comprising San Francisco City and County government perform a wide variety of complex functions in providing services to City and County residents. The management and operation of City and County government have become increasingly complex in recent years due to a variety of factors, including:

- The need to provide new or improved services to its citizens.
- The need to develop or restructure programs to meet increased and changing service and operational requirements.
- The need to keep pace with rapidly changing technologies in government operations.
- The need to keep citizens adequately informed and have them participate actively in City and County government.
- The need to balance expenditures against available revenues.

These problems and needs become more difficult to manage when tax-payers, such as those in the City and County of San Francisco, become opposed to increasing tax rates. In addition, because of the pressing demands of daily operations and limited administrative staff, most

managers usually cannot devote sufficient time to finding ways of reducing costs while maintaining or improving the levels of essential services.

Recognizing these needs and problems, the management of the City and County of San Francisco determined it would be beneficial to the taxpayers to undertake an Operations Analysis Program designed to improve operating procedures, staff utilization and budget development. It was determined that initially a pilot program would be undertaken in selected departments under the responsibility of the Chief Administrative Officer to demonstrate the applicability of an Operations Analysis Program for the City and County.

The objectives of an Operations Analysis Program for the City and County were established as follows:

- To improve the methods and procedures for accomplishing work.
- To provide the tools for establishing appropriate staffing requirements relative to the volume of work and the level of service provided.
- To provide the tools to assist unit supervisors in planning and controlling the work under their responsibility.
- To provide a means for determining more accurately budgetary staffing requirements.
- To attain the cost savings associated with improved methods, procedures and staffing controls.

In addition, a prime objective of the program was to train, develop and upgrade a number of nonprofessional employees who showed promise of developing a capacity for assuming professional responsibilities as operations analysts. Such training and development would not only provide upward mobility for a number of City and County employees, but it would also provide a staff of trained operations analysts who could maintain and expand the Operations Analysis Program.

To assist in the development and implementation of an Operations Analysis Program the City and County of San Francisco applied for federal funds through the United States Civil Service Commission, Intergovernmental Personnel Act of 1970. Resolution 3-72, adopted by the San Francisco Board of Supervisors, and signed by Mayor Joseph Alioto, approved the submission of the Federal Grant Application. The application for federal funds was approved in March, 1972 and the pilot Operations Analysis Program officially got underway in April, 1972.

II. PLANNING AND PREPARATION

II. PLANNING AND PREPARATION

The first two months of the program were devoted to various planning and preparation activities, such as development of a work plan; selection of pilot areas for the conduct of the Operations Analysis Program; development of analyst and supervisory training programs; recruitment and selection of analysts; and training of the analysts and supervisors in operations analysis techniques. Details relating to the various planning and preparation activities are described in the following paragraphs.

1. AN OVERALL WORK PLAN WAS DEVELOPED

As an initial step in the program, an overall work plan was prepared to guide the efforts of the program team in the development and implementation of the Operations Analysis Program. The work plan, shown as Exhibit I, following this page, consisted of eight inter-related phases. Details relating to each of the program phases are presented in subsequent sections of this chapter.

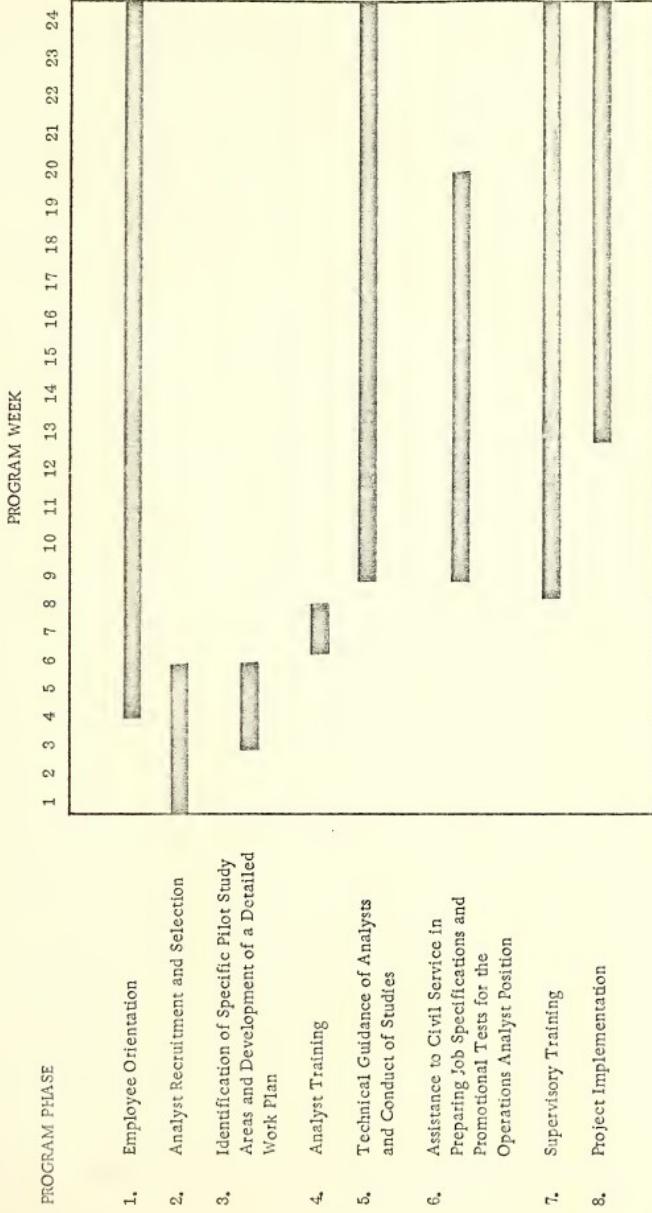
2. ANALYSTS WERE RECRUITED AND SELECTED

A primary objective of the Operations Analysis Program was to provide upward mobility for a number of nonprofessional City employees

EXHIBIT I

CITY AND COUNTY OF SAN MATEO

PROGRAM WORK PLAN



who showed promise of developing a capacity for assuming professional responsibilities. Considerable effort, therefore, was devoted to the analyst recruitment and selection phase of the program. The steps involved in recruiting and selecting the analysts are described in the following paragraphs.

(l) A Career Promotional Opportunity Announcement Was Developed and Distributed

A Career Promotional Opportunity Announcement was developed and distributed to all departments reporting to the Chief Administrative Officer inviting all employees within the specified departments who have permanent civil service status to apply for a position as an Operations Analyst Trainee. Other requirements for application were minimal and included graduation from high school or the equivalent; education or experience indicating analytical ability; ability to make accurate arithmetic computations; ability to establish and maintain effective working relations with others; or, presentation of a written statement which gives indication of these abilities. The Career Promotional Opportunity Announcement is shown as Appendix A to this report.

(2) Information About the Operations Analysis Program Was Distributed

Letters to department heads and news releases for publication in employee organization newspapers were prepared and distributed to inform all appropriate City personnel about the Operations Analysis Program; to stimulate interest in the program; and, to encourage interested City employees to apply for a position as an Operations Analyst Trainee. Representative samples of correspondence relating to the program are shown as Appendix B.

(3) Applications For the Position of Operations Analyst Trainee Were Processed

As a result of the Career Promotional Opportunity Announcement and subsequent publicity about the Operations Analysis Program, over 250 applications were received and processed by the Civil Service Commission. Applications were received from individuals currently working in classifications such as gardener, nurse, janitor, engineer and accountant. Only about 30 percent of the applicants had college degrees.

(4) A Test To Measure Analytical Ability Was Administered

A written test was selected for use in testing the analytical ability of the applicants. The test was non-job related, but rather

it tested the applicants' ability to draw sound conclusions from certain available data. The test was administered and scored by the Civil Service Commission. Over 200 applicants took the test. The 40 people scoring highest on the analytical test were selected for oral interviews.

(5) Oral Interviews Were Conducted

A three-man oral board was established to interview the 40 employees scoring highest on the written examination. The oral board consisted of Mr. T.G. Miller, Executive Assistant to the Chief Administrative Officer; Mr. W. Miller, Representative of the Personnel Department; and Mr. R.M. Pinsky, Project Manager from the consulting firm. A specific list of questions and scoring procedures were established in advance of the interviews. The interview sessions were designed to determine the oral communication skills of the applicant and to determine his ability to work with individuals at various organizational levels within the City.

(6) Eleven Employees Were Selected to Participate In The Formal Training Portion of the Program

As a result of the testing and interview process eleven employees were selected to participate in the classroom training

portion of the program. In selecting the eleven employees, the results of the written test and oral interviews were combined to attain a composite score for each applicant. The eleven employees with the highest composite scores were selected for the classroom training. Although the Career Promotional Opportunity Announcement indicated that nine employees would be selected for classroom training, eleven were selected because two of the top nine applicants indicated in the oral interview a possibility of pursuing a career opportunity other than as an operations analyst.

3. A TRAINING PROGRAM FOR ANALYSTS WAS CONDUCTED

A training program encompassing the techniques that would be used in the conduct of operations analysis studies was conducted for the applicants selected for classroom training. The training program consisted of 80 hours of training conducted in 10 eight-hour sessions. The training involved lectures, demonstrations and workshop application sessions and covered the theory, principles and practices of work description, work simplification, work measurement, performance reporting and control, and program installation and maintenance. In addition, the human relations aspects of the program were stressed.

A training manual, with supporting passout material, was developed and provided to each trainee. The contents of the training manual are briefly outlined in Appendix C.

4. SIX EMPLOYEES WERE SELECTED FOR ON-THE-JOB TRAINING

Following the completion of the two weeks of classroom training, six of the trainees were selected to participate in the conduct of operations analysis programs in selected pilot areas and to receive additional on-the-job training. The final selection of the six employees to continue in the program was made on the basis of their ability as demonstrated during the classroom training; their sensitivity to other trainees which demonstrated their ability to get along with people; their interest in the program and in becoming operations analysts; and, an interview following the completion of the classroom training.

Mr. T. G. Miller, Executive Assistant to the Chief Administrative Officer; Mr. G. Boreman, Management Analyst for the Chief Administrative Officer; and, Mr. R. M. Pinsky, Project Manager for the consulting firm evaluated the performance of each of the trainees daily and participated in the final interview.

The names and backgrounds of the six analysts selected for on-the-job training are shown in Appendix D.

5. SIX PILOT PROGRAM AREAS WERE SELECTED FOR
IMPLEMENTATION OF THE OPERATIONS ANALYSIS
PROGRAM AND WORK PLANS WERE DEVELOPED

Department Managers reporting to the Chief Administrative Officer were interviewed to determine their interest in having an Operations Analysis Program conducted within their departments and to identify potential pilot program areas. In each department contacted, interest was high and more areas were identified as possible pilot program areas than could be accommodated within the scope of the pilot Operations Analysis Program. In total, six areas were selected for implementation of the Operations Analysis Program. Selection of the six areas was based on the following criteria:

- Department managers and unit supervisors who demonstrated an interest in participating in the program.
- Work areas that performed relatively uncomplicated work processes that could be studied in a short period of time to maximize the benefits from the pilot program areas.
- Departments or work units that had identified specific work processes which were in need of improvement to improve service or reduce costs.
- Departments or work units where there were a relatively large number of people working on relatively few work processes to minimize the cost per employee covered by the program.

The six areas selected for implementation of the pilot program are shown on Exhibit II, following this page.

Following the identification of the pilot program areas, a schedule was developed for the conduct of the program in each of the pilot areas. The schedule showed the major activities to be accomplished and the planned start and completion dates for each activity. The chart was used to guide the efforts of the analyst; to assist in communications with the pilot area supervisors and employees; to track the progress of the program in each of the pilot areas; and, to instill in the analyst the need to carry out work according to a pre-established schedule. A representative schedule for one of the pilot areas is shown as Appendix E.

6. PILOT AREA SUPERVISORS WERE TRAINED IN OPERATIONS ANALYSIS CONCEPTS AND TECHNIQUES

A training program was developed and implemented for supervisors from the pilot program areas. The purpose of the training program was to acquaint each supervisor with the concepts and techniques of operations analysis; to give him practice in the use of the techniques; to define his role in the program; to instill confidence in him regarding the applicability of the program to his work area; and, to prepare him for implementation of improvements and use of the data resulting from the program.

EXHIBIT II

City and County of San Francisco
PILOT PROGRAM WORK AREAS

- Purchasing Department
 - Billing Unit
- Finance and Records Department
 - Recorders Office
- Public Health Department
 - Laundry, Laguna Honda Hospital
 - Admitting Office, San Francisco General Hospital
 - Medi-Cal Billing Section, San Francisco General Hospital
- Public Works Department
 - Federally Assisted Code Enforcement (FACE) Field Offices, Property Conservation Division

A training manual, with supporting instructional aids, was developed for use in the supervisory training program. The training manual documents the program concepts and techniques; outlines the procedures to be used in the conduct of the program and, defines the role of the supervisor in the development and implementation of the program.

The training program consisted of six, two-hour sessions conducted over a six week period. The training sessions were scheduled to occur concurrent with the various program phases to provide appropriate instruction and discussion prior to the beginning of each phase. In total 15 key personnel from the pilot program areas attended some or all of the sessions.

* * * *

The planning and preparation steps described above provided a firm foundation for implementation of the program in the various pilot areas, and for on-the-job training of the analysts and area supervisors. The next chapter provides a discussion on the steps involved in the conduct of work improvement studies in the various pilot program areas.

III. CONDUCT OF WORK IMPROVEMENT STUDIES

III. CONDUCT OF WORK IMPROVEMENT STUDIES

Work improvement studies were conducted to analyze and simplify procedures and to establish the most accurate time standard feasible for each process, weighing the cost of developing the standard against the effect of accuracy on potential savings and control. Emphasis was placed on recognizing the unique conditions present in each situation. Supervisors actively participated in the program. Their involvement was facilitated by their training in the practical application of the techniques utilized in the program. Control procedures were then established to allow the manpower staffing levels to be balanced more closely with workloads.

1. WORK DISTRIBUTION CHARTS WERE PREPARED

The supervisor of each area estimated the normal distribution of each employee's time on each process performed by the area. The total manhours per month devoted to each process were established and the processes were ranked according to the amount of manhours used. By highlighting the relative importance of each process, priorities were established and the appropriate level of analytical effort for subsequent study was determined.

2. PROCESS DEFINITIONS AND DESCRIPTIONS WERE DEVELOPED

A basic narrative description of the steps involved in each process was prepared by interviewing and observing employees. These descriptions were reviewed with supervisors to identify missed processes, combine related processes, and to establish the clearest and most precise title for each process.

3. PROCESS FLOW CHARTS WERE DEVELOPED

Process Flow Charts were developed for each major process to describe the steps taken, the forms used, the starting point, the end point, the input documents, the output documents and the positions involved. Each chart was reviewed with appropriate supervisors and employees to ensure its completeness and accuracy.

The Process Flow Charts were utilized to:

- Identify and define the basic count point and count item.
- Provide a vehicle of communication between the analyst and supervisor to ensure that both understood what was included in the process and agreed that it was completely described.
- Aid the analyst in choosing the best technique to measure the process.
- Provide an accurate documentation of the specific work content included in the final standards.

- Assist in establishing the effect of future changes in systems, procedures and methods.
- Provide a basis for analyzing methods improvement opportunities.

Preliminary work counts were initiated during this step to collect data for subsequent staffing level determinations.

4. METHODS IMPROVEMENTS WERE IDENTIFIED AND, WHERE FEASIBLE, EVALUATED AND IMPLEMENTED

The data collected in the previous steps were analyzed. The purposes of these analyses was to:

- Identify work steps and processes that could be eliminated because they were being duplicated elsewhere or were unnecessary.
- Develop opportunities for improvement and simplification by considering alternative methods of accomplishing the required work in the most economical manner.
- Develop a thorough understanding of the work area, its objectives, work processes and problems. This understanding was necessary to ensure that the most practical measurement technique would be selected and that only necessary work would be measured.

In addition, employees and supervisors identified problems, raised questions which eventually led to improvement ideas, and suggested specific improvement changes.

Dozens of improvement ideas were identified. Those ideas which appeared as though they could be evaluated and implemented within a few days were analyzed in detail. Exhibit III, following this page, is a sample methods improvement documentation form. Each improvement recommendation was developed and reviewed with appropriate levels of management for approval. The analysts provided assistance, wherever beneficial, in the installation of approved changes.

5. WORK MEASUREMENT STANDARDS WERE DEVELOPED

The objective of this portion of the program was to determine the time required for accomplishing necessary work. Work measurement standards were developed for each process to determine what an average qualified and trained employee is capable of performing at a fair day's work pace.

A variety of work measurement techniques were used including pre-determined time standards, time ladders (statistical) and time study.

The most appropriate technique of work measurement was used in each instance considering:

City and County of San Francisco

METHODS IMPROVEMENT DOCUMENTATION FORM

DATE: 8-3-72 ORIGINATING ANALYST: L. Cunanan IMPROVEMENT NO: 1

FOLLOW-UP ANALYST (If Long-Range): _____ IMPLEMENTATION DATE: _____

IMPROVEMENT TITLE: Modify Procedure for Renting Space

UNITS INVOLVED:	REVIEW - AS REQUIRED:		
	POSITION	NAME	INITIALS
Finance and Records Department	Director F & R	V. Elliott	
Recorder's Office	Recorder	M. Mongan	
Recorder's Office	Asst. Recorder	L. Leguennec	

I. Recommendation Summary

Provide space in the Recorder's Office to commercial firms only when directly advantageous to the City and in those instances charge title companies rent for actual space occupied and services provided (utilities) based on commercial rates in the Civic Center Area.

II. Present Method

Title companies rent desks in the Recorder's Office to provide themselves ready and easy access to documents. Rent varies from \$5.00 to \$12.50 per desk. Rates do not reflect space occupied and services provided (desk, utilities, etc.).

III. Problems

The advantages of providing space to commercial firms outweigh the disadvantages provided the City charges rent in accord with commercial rates.

Disadvantages:

Title companies occupy space urgently needed by City government departments forcing the departments to occupy buildings adjacent to City Hall.

The City is providing services at rates less than that charged by commercial firms in the Civic Center Area resulting in a net loss to the City because the City must in turn rent commercial space to offset the space loss.

Current annual income for the space now occupied by title companies (about 1152 sq. ft.) is approximately \$2600. Based on the current prevailing rates for office space in the Civic Center Area (40¢ to 65¢ per sq. ft.), income should be between \$5529 and \$8986. Consequently, the direct annual net loss could range from \$2929 to \$6386.

City and County of San Francisco

METHODS IMPROVEMENT DOCUMENTATION FORM

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IMPROVEMENT TITLE: Modify Procedure for Renting Space

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DATE: 8-3-72 ORIGINATING ANALYST: L. Cunanan IMPROVEMENT NO: 1

Advantages:

Title company personnel currently review documents, etc., using their own readers and with minimum interruption to City employees whereas they would have to use the Recorder's Office readers resulting in considerable tie-up of equipment if they were stationed elsewhere.

Documents are currently hand-carried to title company personnel upon release whereas they would have to be mailed back to the various title companies if their personnel were not allowed space in the Recorder's Office resulting in an increase in postage expense of 30% to 50%.

IV. Benefits

City government will improve its image by being more efficient and economically oriented; rental income will increase by 160% (from \$2600 to \$6400).

V. Implementation

Determine actual floor space occupied by each private firm.

Obtain rental rates from the Real Estate Department and apply to floor space usage figures to determine proper costs to charge each title company.

Notify title companies of change in rental rates.

- Time and costs of developing and maintaining the standard.
- Relative magnitude of manhours per year devoted to the process and its complexity in terms of the length of the cycle time and the variability in methods used.
- Program approach of measuring group performance which allowed the grouping of related activities, where appropriate, into one process to simplify counting for reporting purposes.
- Station-manning requirements.
- Anticipated use of time standards as basic building block data for development of the personnel budget both in line item and program format.

Upon finalization of the time standards, the developmental process and the resulting standards were reviewed with the supervisors. Frequently, the standards were refined at this stage to reflect more accurately the work content, the prescribed method and the desired levels of quality and service.

In every instance, sufficient detail, documentation and backup material were developed in an understandable form and made available to the supervisor to facilitate his review and evaluation of the resulting time standards. These reviews and the accompanying adjustments proved to be an invaluable step in ensuring the accuracy and completeness of the time standards.

A comprehensive operating manual including the time standards, process definitions, and count item and count point listings was provided to each supervisor to facilitate use of the standards as a work management tool. In addition, the consolidation of these materials will facilitate future review and maintenance activities.

Engineered or detailed work standards were developed for the work performed by about 90 percent of the positions studied. All other authorized positions which were not practical or economical to measure with engineered techniques were measured by other techniques and were included in the control reporting system to provide a means of control over all positions.

6. A CONTROL REPORTING SYSTEM WAS DEVELOPED AND INSTALLED

The essence of the Operations Analysis Program is improvement--and improvement requires prompt and positive action to correct poor performance and unfavorable trends.

A control reporting system was developed and installed to provide performance data for each supervisor of the program areas. These data are presented in Manpower Utilization Reports which identify, in two ways, how well a supervisor used or managed the personnel under his direction:

(1) Percent Utilization

Percent utilization is calculated by dividing the standard hours (hours that should have been used) by the actual hours (hours used).

$$\frac{\text{Standard Hours}}{\text{Actual Hours}} = \% \text{ Utilization}$$

Manpower resources are being properly utilized when this ratio is 100%. Utilization will exceed 100% when work is accomplished at a rate greater than that embodied in the standards. Utilization will be less than 100% when sufficient work is not available to occupy the available staff or when work is accomplished at a rate less than that embodied in the standards.

The time for unusual occurrences, training, personal needs, rest and minor unavoidable delays have been included in the standards. Consequently, a utilization level of 100% is an attainable level which should be exceeded as often as it is not achieved.

The utilization percent is an all-inclusive figure which indicates how well a group of employees have been managed.

(2) Over- or Under-Staffing

The difference between standard hours and actual hours converted to equivalent full time personnel measures the number of employees the area is over-or under-staffed for the time period represented by the report.

By interpreting the above two figures, a supervisor can determine how effective a manager he is--and he can also determine the amount of improvement that may be required for the effective utilization of his employees' time. Through analyses of the content of the Manpower Utilization Reports the supervisor can determine the specific courses of action necessary to accomplish improvements.

Exhibit IV, following this page, shows the format of the Manpower Utilization Report for a first-line supervisor. This report is computed manually by the area supervisor on a weekly basis. The report will eventually be produced on a monthly basis. The reporting system has been implemented in nearly all the pilot program areas.

Also established were the format and procedures for developing similar reports of a summary nature for each level of supervision up to and including a report for the Chief

WEEKLY MANPOWER UTILIZATION REPORT FOR A FIRST-LINE SUPERVISOR

Week Ending —October 6, 1960

DEPARTMENT	DIVISION	PROCESS NAME	SECTION	STANDARD HOURS, PER ITEM MEASURED	NUMBER OF ITEMS COMPLETED	STANDARD HOURS	UNIT BILLING	3. Total Regular Employee Hours Available ($1 \times 2.$) =	250
Purchasing	B-1	Complete matching of material received reports <small>(MRI) and purchase orders.</small>	MRI	0.223	441	100.85		4. Total Additional Hours Available	
	B-2	Clerical technical office support	DAY	4.173	5	20.87			
	B-3	Supervision	DAY	1.783	5	8.92		5. Total Regular and Additional Hours Available: $(3 + 4.) =$	230

<p>9. Percent Utilization</p> $\frac{\text{Total Standard Hours}}{\text{Net Hours Available}} = \boxed{57\%}$	<p>C. EQUIVALENT EMPLOYEES:</p> <p>10. Available ($7 \div 2.1$) = 5.7</p>
----------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------

A. NET HOURS AVAILABLE		
1. Total Regular Employees	7	
2. Working Hours This Period; No. Working Days 5 \times 8 =	40	
11. Required (Total Standard Hours \div 2.) =		3.3
12. Over or (Under) (10. - 11.) =		2.4

Administrative Officer for all departments reporting to him.

Exhibit V, following this page, shows the report format for second and higher level supervisors. These reports will be implemented as data is available for a majority of the areas that comprise a major organizational unit.

All supervisors and key employees in the study areas were instructed in the procedures for tallying counts of the work performed and maintaining time records.

Since the Manpower Utilization Reports provide the City with a comprehensive and effective work management tool, all supervisors in the study areas were trained in their preparation and interpretation.

7. A MANPOWER REVIEW AND AUTHORIZATION PROCEDURE USING TIME STANDARDS WAS ESTABLISHED TO EVALUATE ALL PERSONNEL ACTION REQUESTS

Procedures and forms to enable supervisors to determine future staffing requirements utilizing time standards and projected work volumes have been developed. All supervisors in the study areas have been instructed in the use of these procedures and a policy has been adopted requiring that a Determination of Personnel Requirements form be attached to all Personnel Action Requests from areas where standards have been developed. A completed sample of this form is shown in Exhibit VI, following this page.

WEEKLY MANPOWER UTILIZATION REPORT FOR A SECOND-LINE SUPERVISOR

WEEK ENDING: OCTOBER 6, 1972

PURCHASING DEPARTMENT

NUMBER	ORGANIZATION NAME	NET HOURS AVAILABLE	STANDARD HOURS	PERCENT UTILIZATION	OVER/UNDER HOURS	OVER/UNDER
						EQUIV. EMP.
001	Billing Unit	228	132	58	96	2.4
002	Purchase Order Unit	XXX	XXX	XX	XX	X, X
003	Bidding Unit	XXX	XXX	XX	XX	X, X
010	Supervisor, Purchasing Section	40	40	100	-	-
	Section Totals					
		XXX	XXX	XX	XX	X, X
	XXX	These figures will be added as the program is completed in the respective areas.				

EXHIBIT VI

City and County of San Francisco

DETERMINATION OF PERSONNEL REQUIREMENTS FORM

DEPARTMENT Purchasing		DIVISION		SECTION Billing Unit		DATE October 1972	
1	2	3	4	5	6	7	8
NUMBER ITEM STANDARD HOURS IN STANDARDS MANUAL	VARIABLE STANDARD HOURS PER ITEM (AVAILABLE IN STANDARDS MANUAL)	CONSTANT: HOURS PER DAY OR PERCENT	ESTIMATED NUMBER OF ITEMS TO BE COMPLETED PER MONTH (DEVEL- OPED BY PROJECTING WORKLOAD FOR 3 MONTH PERIOD)	VARIABLE STANDARD HOURS PER MONTH (COLUMN 2 X COLUMN 4)	CONSTANT HOURS PER MONTH (COLUMN 3 X WORKING DAYS) OR COLUMN 3 X HOURS AVAIL- ABLE PER MONTH	TOTAL STANDARD HOURS REQUIRED (TOTAL COLUMN 5 PLUS TOTAL COLUMN 6)	STANDARD HOURS REQUIRED CONSIDERING - LEAVE (DIVIDE TOTAL IN COLUMN 7 BY 88)
-1	0.228	-	3000	684	-		
-2	-	4.173	22	-	92		
-3	-	1.783	22	-	39		
			TOTALS	684	131	815	926
NUMBER OF ITEMS PER- IOD (DIVIDE BY 173)	10. PERSONNEL AND HOURS ASSIGNED PERSONNEL PERMANENT PART TIME EMERGENCY PART TIME SEASONAL TEMPORARY TOTAL	HOURS 1038	11. PERSONNEL AND HOURS REQUIRED PERSONNEL PERMANENT PART TIME EMERGENCY PART TIME SEASONAL TEMPORARY TOTAL	HOURS 865	12. MANPOWER UTILIZATION LAST MONTH	TREND	
.4	(10A)	(10B)	(11A)	(11B)	53	63	

Although the calculations show a need for 5.4 employees versus the 7 in the Unit I request that we maintain our staff at 7 for the immediate future for the following reasons:

- A. I am new in my position and have not fully evaluated the potential of all employees nor the true requirement of my job. Several employees are new and consequently a slight backlog has developed while they have been learning the job. The backlog should be processed prior to making any staff changes.

SUBMITTED BY: Mary Davis Billing Unit Supervisor
NAME _____ TITLE _____ DATE _____

CONCUR WITH NEED FOR PERSONNEL

DO NOT SIGN

EXHIBIT VI

City and County of San Francisco

DETERMINATION OF PERSONNEL REQUIREMENTS FORM

DEPARTMENT Purchasing		DIVISION		SECTION Billing Unit		DATE October 1972	
1	2	3	4	5	6	7	8
STANDARD NUMBER AVAILABLE IN STANDARDS MANUAL	VARIABLE STANDARD HOURS PER ITEM (AVAILABLE IN STANDARDS MANUAL)	CONSTANT: HOURS PER DAY OR PERCENT	ESTIMATED NUMBER OF ITEMS TO BE COMPLETED PER MONTH (DEVEL- OPED BY PROJECTING WORKLOAD FOR 3 MONTH PERIOD)	VARIABLE STANDARD HOURS PER MONTH (COLUMN 2 X COLUMN 4)	CONSTANT HOURS PER MONTH (COLUMN 3 X WORKING DAYS) OR COLUMNS 5 X HOURS AVAIL- ABLE PER MONTH	TOTAL STANDARD HOURS REQUIRED (TOTAL COLUMN 5 PLUS TOTAL COLUMN 6)	STANDARD HOURS REQUIRED CONSIDERING 1. LEAVE (DIVIDE TOTAL IN COLUMN 7 BY 88.1)
B-1	0.228	-	3000	684	-		
B-2	-	4.173	22	-	92		
B-3	-	1.783	22	-	39		
			TOTALS	684	131	815	926
NUMBER OF EQUIVALENT FULL TIME PER- SONNEL (DIVIDE TOTAL IN COLUMN 8 BY 173)	10. PERSONNEL AND HOURS ASSIGNED PERSONNEL	HOURS	11. PERSONNEL AND HOURS REQUIRED PERSONNEL	HOURS	12. MANPOWER UTILIZATION		
PERMANENT	6.	1038	PERMANENT	5	865		
PART TIME EMERGENCY			PART TIME EMERGENCY				
PART TIME SEASONAL	1	173	PART TIME SEASONAL	0.4	61		
TEMPORARY			TEMPORARY	5.4	926		
TOTAL	(10A)	7 (10B)	TOTAL	(11A)	(11B)	53	63

MARKS:
 Although the calculations show a need for 5.4 employees versus the 7 in the Unit I request that we maintain our staff at 7 for the immediate future for the following reasons:

- A. I am new in my position and have not fully evaluated the potential of all employees nor the true requirement of my job.
- B. Several employees are new and consequently a slight backlog has developed while they have been learning the job. The backlog should be processed prior to making any staff changes.

SUBMITTED BY: Mary Davis

Billing Unit Supervisor

NAME

NAME

TITLE

NAME

TITLE

DATE

EXHIBIT VI

City and County of San Francisco

DETERMINATION OF PERSONNEL REQUIREMENTS FORM

DEPARTMENT Purchasing		DIVISION		SECTION Billing Unit		DATE October 1972	
1	2	3	4	5	6	7	8
STANDARD NUMBER TABLE IN STANDARDS MANUAL)	VARIABLE STANDARD HOURS PER ITEM (AVAILABLE IN STANDARDS MANUAL)	CONSTANT: HOURS PER DAY OR PERCENT	ESTIMATED NUMBER OF ITEMS TO BE COMPLETED PER MONTH (DEVEL- OPED BY PROJECTING WORKLOAD FOR 3 MONTH PERIOD)	VARIABLE STANDARD HOURS PER MONTH (COLUMN 2 X COLUMN 4)	CONSTANT HOURS PER MONTH (COLUMN 3 X WORKING DAYS PER MONTH OR COLUMN 3 X HOURS AVAIL- ABLE PER MONTH)	TOTAL STANDARD HOURS REQUIRED (TOTAL COLUMN 5 PLUS TOTAL COLUMN 6)	STANDARD HOURS REQUI- RED CONSIDER- ING LEAVE DIVI- SION TOTAL IN COLUMN 7 BY 8%
-1	0.228	-	3000	684	-		
-2	-	4.173	22	-	92		
-3	-	1.783	22	-	39		
		TOTALS		684	131	815	926
NUMBER OF EQUIVALENT TIME PER- IOD (DIVIDE BY 173)	10. PERSONNEL AND HOURS ASSIGNED PERSONNEL HOURS		11. PERSONNEL AND HOURS REQUIRED PERSONNEL HOURS		12. MANPOWER UTILIZATION		
PERMANENT	6	1038	PERMANENT	5	865		
PART TIME EMERGENCY			PART TIME EMERGENCY				
PART TIME SEASONAL	1	173	PART TIME SEASONAL	0.4	61		
TEMPORARY			TEMPORARY	5.4	926		
TOTAL	(10A)	(10B)	TOTAL	(11A)	(11B)	53	60

MARKS:
 Although the calculations show a need for 5.4 employees versus the 7 in the Unit 1 request that we maintain our staff at 7 for the immediate future for the following reasons:

- A. I am new in my position and have not fully evaluated the potential of all employees nor the true requirement of my job.
- B. Several employees are new and consequently a slight backlog has developed while they have been learning the job. This backlog should be processed prior to making any staff changes.

Mary Davis

Billing Unit Supervisor

SUBMITTED BY: _____

NAME

TITLE

NAME

TITLE

DATE

* * * *

Upon completion of these tasks the Operations Analysis Program was formally installed. All of the necessary ingredients of an effective improvement program have been developed to suit the unique characteristics of the City. These include improved methods, time standards, a control reporting system, and procedures to balance the staffing levels with workloads. In addition, the means to perpetuate the program through the establishment of an in-house capability has been provided.

IV. PROGRAM BENEFITS

IV. PROGRAM BENEFITS

Significant benefits, both tangible and intangible, have resulted from the development and implementation of the Operations Analysis Program. These benefits include:

- The identification of significant cost reduction opportunities.
- A staff of trained analysts to maintain and expand the program.
- Improved methods and procedures.
- Improved employee utilization.
- Improved supervisory capability.
- Improved service.
- The development of data to assist in more accurately determining budgetary staffing requirements.
- The testing of new procedures for recruiting, selecting and promoting employees.

The following paragraphs provide a brief description of the major benefits resulting from the program.

1. COST REDUCTION AND COST AVOIDANCE OPPORTUNITIES AMOUNTING TO OVER ONE MILLION DOLLARS HAVE BEEN IDENTIFIED

One of the major objectives of the Operations Analysis Program was to attain the cost savings and improved service benefits associated

with the identification and implementation of improved methods and procedures, and improved employee utilization. The program has successfully met this objective. In total, opportunities to improve methods, procedures and employee utilization amounting to \$1,273,000 have been identified. In addition, a number of service improvement opportunities have been identified. Exhibit VII, following this page, provides a summary of the savings potential identified during the course of the pilot program. Appendixes F and G provide additional savings documentation. Of the \$1,273,000 savings potential, \$927,400 can be realized from implementation of improved methods and procedures, and \$345,600 can result from improved employee utilization. The majority of the methods improvement opportunities have been implemented and cost benefits should begin to accrue in the near future. Employee utilization data is relatively new, but is already being used by City management to make staffing decisions. In addition, several department managers have instructed their supervisors to develop and initiate plans to improve employee utilization.

A comparison of the potential savings of \$1,273,000 with the pilot program costs of approximately \$83,000, including analyst salaries, clerical assistance, supervision provided by the Office of the Chief Administrative Officer and consulting costs indicates that the return on the investment in the first year of the program could reach a ratio of over 15 to one, and excluding the one time

City and County of San Francisco

PROGRAM AREA	IMPROVEMENTS (1)	POTENTIAL ANNUAL DOLLAR SAVINGS FROM METHODS	POTENTIAL ANNUAL DOLLAR SAVINGS FROM INCREASED EMPLOYEE UTILIZATION (2)	TOTAL ANNUAL DOLLAR SAVINGS	POTENTIAL PROGRAM BENEFITS
		<u>SERVICE IMPROVEMENTS</u>			
Purchasing Department	Billing Unit	\$ 12,500	\$ 20,400	\$ 32,900	Faster processing of vendor invoices.
Finance and Records Department	Recorder's Office	18,500	55,000	73,500	Faster processing of a multitude of recording and reproduction activities performed for the public.
Public Health Department	Laundry, Laguna Honda Hospital	46,400	118,800	165,200	Uniform availability of linen to aged patients.
	Admitting Office, San Francisco General Hospital	50,000	66,400	116,400	More equal and fair treatment of patients.
	Medi-Cal Billing Section, San Francisco General Hospital	800,000	85,000	885,000	Increased revenue and faster processing of Medi-Cal claims.
Public Works Department	Federally Assisted Code Enforcement (FACE) Field Offices, Property Conservation Division		Not easily measurable.	(3)	
				\$ 927,400 (3)	
	TOTALS			\$ 345,600	<u>\$ 1,273,000</u>

(1) Savings are detailed in Appendix A.

(2) Savings are detailed in Appendix B.

(3) Analysis not yet completed.

consulting costs of \$34, 400 the return on the investment after the first year could reach a ratio of approximately 26 to one. This represents a significant return on the investment for the City.

2. AN IN-HOUSE CAPABILITY HAS BEEN DEVELOPED TO MAINTAIN AND EXPAND THE PROGRAM.

An important aspect in the development and implementation of any new program is the availability of trained personnel to effectively carry out the program objectives. To this end, the pilot Operations Analysis Program was designed to develop an in-house capability to implement and maintain the program in the pilot areas and to expand it to other areas of the City. The pilot program has effectively met this objective. Six analysts have been trained in operations analysis techniques, and following some additional on-the-job guidance which will be discussed in the next chapter, these analysts will have the capability to effectively maintain and expand the program.

3. UPWARD MOBILITY FOR SIX EMPLOYEES HAS BEEN ACHIEVED THROUGH THE IMPLEMENTATION OF NEW RECRUITMENT AND SELECTION PROCEDURES

A prime objective of the pilot Operations Analysis Program was to develop and upgrade a number of nonprofessional City employees who showed promise of assuming professional responsibilities as operations

analysts. To accomplish this objective new recruitment and selection procedures were used to identify employee capabilities and interests. Through a process involving analytical testing, interviewing, and classroom training six analysts were selected to participate in implementation of the pilot Operations Analysis Program. A detailed description of the recruitment and selection process was presented in Chapter II.

Although the six employees have not yet taken the promotional exam -- the exam is currently being developed and will be administered sometime during the coming month -- they have during the past six months demonstrated the ability to assume and effectively carry out responsibilities as operations analysts. As a result there is little doubt that they will pass the exam and be promoted to operations analysts. Thus, six employees with classifications of medical orderly, senior clerk, auto serviceman, inspector of weights and measures, management assistant and account clerk have been given the opportunity to utilize their skills more effectively. This opportunity has already resulted in benefits for the City and will provide in the near future the benefit of upward mobility for the six employees.

4. OTHER SIGNIFICANT BENEFITS HAVE BEEN ACHIEVED

There are a number of other benefits that have been achieved as a result of the program. The most significant of these are described below:

(1) Increased Capability of Supervision

The capabilities of the supervisors have, in most instances, been increased during the period of program installation. The influence of the supervisory training program, the questioning approach used in the development of methods improvements, and the analytical process involved in developing time standards all contributed toward increasing the supervisor's ability to manage his operations. Even more importantly, the processing of greater work loads while not increasing staffing levels, an accomplishment of some of the pilot area supervisors at this time, proved to these supervisors that they are capable of scheduling and controlling work to attain higher employee utilizations.

(2) More Objective Evaluations of Employees

Although the level of work output is only one of several criteria a unit supervisor should use to evaluate the performance of an employee, it is an extremely important one. Heretofore, in most cases, neither the unit supervisor nor the employees had accurate standards of work output at their disposal and, consequently, evaluations by supervisors of employee productivity were almost totally subjective.

With the availability of data developed during the program the employee will know what output level is expected of him and at the same time the unit supervisor has accurate standards with which to objectively gauge employee performance.

(3) More Effective Evaluation of Unit Supervisors

The Manpower Utilization Reports identify how well a unit supervisor manages the employees for whom he is responsible. The percent utilization figure indicates how well a supervisor performed tasks such as planning work, motivating employees and assigning tasks. The percent utilization figures serve as a consistent benchmark among all unit supervisors and insures more equal treatment and more reliable evaluations of supervisory effectiveness. Judgments made in this manner should cultivate initiative on the part of each unit supervisor to fulfill his responsibilities and ultimately produce a more capable hierarchy of management.

(4) More Accurate Development of Budgets

Extending anticipated work volumes by time standards and by labor costs, including fringe and leave considerations, produces the anticipated costs for job accomplishment. A

budget developed in this manner has more substance than one developed solely on historical data, which generally does not reflect what should be accomplished. Data developed during the program will assist in the development of more accurate budgets.

Other intangible benefits which are also being realized include more equitable distribution of work loads among employees, more prompt answering of inquiries made possible by simplified methods, adoption of a questioning attitude by supervisors and most importantly service levels have been improved through improved methods and procedures.

* * * * *

As described in the preceding paragraphs, significant benefits have resulted from implementation of the pilot Operations Analysis Program. To ensure that these benefits continue to accrue and new opportunities for improvements are developed and implemented, plans have been developed for continuing and expanding the program. These plans are discussed in the next chapter.

V. CONTINUING THE PROGRAM

V. CONTINUING THE PROGRAM

The Operations Analysis Program was initiated on a pilot basis and restricted to those departments reporting to the Chief Administrative Officer. The original plan for the program was to demonstrate its usefulness and practicality prior to expanding it to other major departments of the City. In addition, the original plan was based on the fact that it would take about one year of on-the-job guidance to develop a fully qualified analyst.

At this juncture, approximately six months after the program was initiated in the pilot program areas, the program has exceeded expectations: analysts have developed as anticipated; significant improvement opportunities have been identified; involved department managers have expressed complete satisfaction and confidence in the analysts and the program; and, department managers not reporting to the Chief Administrative Office have reaffirmed their desire to have a number of their personnel trained to carry out operations analysis programs in their departments. The departments who expressed a desire to participate in an expanded Operations Analysis Program, along with the number of employees in the departments and the number of analysts they wish to have trained, are shown in the table below.

<u>DEPARTMENT</u>	<u>NUMBER OF EMPLOYEES IN THE DEPARTMENT</u>	<u>NUMBER OF ANALYSTS EACH DEPARTMENT WISHES TO HAVE TRAINED</u>
Public Utilities	3,675	4
Police	2,543	4
Fire	1,824	4
Social Services	1,264	2
Port	359	2
<hr/>		
TOTALS	9,665	16

Plans have been developed to continue the on-the-job guidance and training of the current six analyst trainees, and to train additional analyst to expand the program into other departments of the City. However, additional funding is required to continue the program. Funds to continue the program are currently being solicited, and assuming their availability, the expanded program should be able to get underway in February, 1973.

APPENDIXES

CAREER PROMOTIONAL OPPORTUNITY ANNOUNCEMENT	A
LETTERS AND NEWS RELEASES PUBLICIZING THE PROGRAM	B
CONTENTS OF ANALYST TRAINING MANUAL	C
ANALYST NAMES AND BACKGROUNDS	D
WORK SCHEDULE FOR A TYPICAL PROGRAM AREA	E
POTENTIAL ANNUAL DOLLAR SAVINGS FROM METHODS IMPROVEMENTS	F
POTENTIAL ANNUAL DOLLAR SAVINGS FROM INCREASED MANPOWER UTILIZATION	G

APPENDIX A

CAREER PROMOTIONAL OPPORTUNITY ANNOUNCEMENT

CAREER PROMOTIONAL Opportunity

OFFICIAL ANNOUNCEMENT

San Francisco Civil Service Commission • 160 City Hall

OPERATIONS ANALYST TRAINEE

Note: Six trainees will be selected on the basis of this examination to participate in a training program of approximately six months duration. This is a pilot training program partially funded by a Federal grant and represents a unique opportunity for training and possible advancement. Training will be conducted on City time. Trainees will be assigned to the office of the Chief Administrative Officer. Trainees who successfully complete the training program will be eligible to participate in a promotional examination for a permanent appointment to a proposed classification of Operations Analyst (Bi-weekly range \$119-\$509; equivalent monthly range \$111-\$1177).

CLASSIFICATIONS ELIGIBLE:

This examination is open to employees of the City and County of San Francisco in the classes listed below who on the beginning date of this examination hold permanent civil service appointment in a position defined by the Civil Service Commission as a regular position or exempt waiver - less than full time position (2000 hours equals one year) and have served their probationary period in such position in any city department in the class(es) listed below or who have permanent civil service status in such class(es) under the provisions of Section 11.1 of Rule IV.

All employees in all classifications in departments under the Chief Administrative Officer as follows:

Agricultural Department
Coroner
Department of Electricity
Department of Finance and Records
Department of Public Health
Department of Public Works
Real Estate Department
Sealer of Weights and Measures

and who also meet the following qualifications:

EITHER:

1. Graduation from high school or the equivalent; AND
2. Education or experience indicating analytical ability, ability to make accurate arithmetic computations, ability to establish and maintain effective working relations with others; OR
3. Presentation of a written statement which gives indication of these abilities.

RECEIPT OF APPLICATIONS CLOSES: April 21, 1972

Mailed applications must be postmarked not later than 12:00 a.m. (midnight) of the last day for filing applications.

BEGINNING DATE OF EXAMINATION: May 6, 1972

Qualified applicants will be notified by mail of the exact date, time and place to report for examination.

CHARACTERISTICS OF THE CLASS (PROPOSED): OPERATIONS ANALYST

Under direction, prepares work distribution charts and flow process charts; identifies, evaluates and implements methods improvements; assists in developing work standards; assists in the development and use of control reports; makes studies and reports on work measurement and work management; recommends methods for program implementation and control of new procedures; and performs such other duties as may be assigned.

- continued -

OPERATIONS ANALYST TRAINEE -P

SCOPE OF EXAMINATION:

1. Applications will initially be screened on the basis of education, related experience, current duties and/or written statement. The screening will be done by a screening board consisting of a key staff member of Office of the Chief Administrator, a Civil Service Commission staff member, and a senior member of the consultant firm assigned to conduct the training program.
2. Candidates selected as a result of the initial screening will be given a written examination designed to test analytical ability.
3. A minimum of twenty-five of the candidates scoring highest on the written test will be given a qualifications appraisal interview.
4. Nine (9) candidates will be selected on the basis of the interview for participation in an intensive two-week training class.
5. Six (6) Operations Analyst Trainees will be selected for participation in the pilot training program on the basis of ability and interest as demonstrated during the above training class.

Issued: April 10, 1972

Bernard A. Orsi
General Manager, Personnel

GENERAL INFORMATION

Applications will be received subject to acceptance after check. Applications will be accepted only if application forms are properly filled out and applicants clearly indicate therein that they possess the requirements set forth in this Bulletin. Applicants shall give full information in answer to all questions on the application form. Failure to give full information or any false or fraudulent statement contained therein are cause for rejection of the application, or if appointed, removal from the position.

Applicants claiming experience in the classified civil service service must state their class number and title and will be given credit for the performance of the work required in the classification in which they were assigned. Applicants may claim credit for the performance of duties outside their classification if such duty has been temporarily assigned under authority of Section 110 of the Charter. Credit for experience will be given reported to the Commission for approval and recertification at the time of assignment in order for credit to be given. Applicants may also claim and receive credit for experience listed on their general classification survey questionnaire which has been approved by the Commission.

CHARACTER AND FITNESS: Applicants must be of good moral character, of temperate and industrious habits and in all respects competent and fit to perform the work in the position applied for. Applicants who are or have been within the five years immediately preceding the filing of an application members of any party or organization, political or otherwise, that advocated the overthrow of the Government of the United States or of the State of California by force or violence or other unlawful means will be rejected.

MEDICAL EXAMINATION: Before certification to permanent employment, applicants must pass a satisfactory medical examination before physicians designated by the Commission.

FILED: Applications cannot be received after the closing date of receipt of applications.

PROMOTION POLICY: Insofar as practicable, higher positions in the midrange civil service are filled by promotional examinations open to permanent civil service employees in designated lower ranks who also possess such minimum training, experience and other qualifications as may be specified in the examination announcement. Minimum qualifications, designation of lower ranks, etc., in promotional examinations, as well as minimum requirements in entrance examinations, will be revised from time to time as circumstances and needs of the service demand in order to assure recruitment of the best qualified personnel.

SPECIAL NOTE: The Civil Service Commission and its staff of employees are related in no way to any private training school; therefore do not request any information regarding such schools.

NO SAMPLE QUESTIONS AVAILABLE

APPENDIX B

LETTERS AND NEWS RELEASES
PUBLICIZING THE PROGRAM

CITY AND COUNTY OF SAN FRANCISCO

OFFICE OF
CHIEF ADMINISTRATIVE OFFICER

March 17, 1972

TO: Heads of Departments under C.A.O.

FROM: Thomas J. Mellon, C.A.O.

SUBJECT: OPERATIONS ANALYSIS PROGRAM

On March 10, 1972, the Regional Office of the U.S. Civil Service Commission awarded a cash grant from Intergovernmental Personnel Act funds for the conduct of an Operations Analysis Program in the departments under the Chief Administrative Officer.

You will recall previous discussions with Thomas Miller (when the application was being prepared) that the Program will emphasize the training of personnel already employed in CAO departments who have the interest and aptitude to become Operations Analysts. We are now preparing an announcement so that employees who are interested in this training can make application. A contract is being prepared for the employment of PAR Technology Inc., a division of Booz-Allen & Hamilton, Management Consultants, for the training of analysts and the conduct of the Operations Analysis Program. The consultant firm will assist in the selection of the employees to be included in the training program. It is anticipated in the pilot program scheduled to begin April 1, 1972, nine employees will be given the training program and six of these will be selected to become Operations Analysts. They will be assigned to this office for administrative purposes.

At the conclusion of the program, you will recall, it is planned to reclassify appropriate positions in the departments under the Chief Administrative Officer so that there will be no increase in the number of authorized positions. The Operations Analysts will then be assigned to a separate unit under the direction of the Chief Administrative Officer for the continuing Operations Analysis Program.

The consultant firm will be contacting department heads for discussion of this program. In the interim, please contact Thomas Miller if you have any questions. The present schedule is to select the members of the training class by the second week of May, when the training program will begin.

Attached is a copy of the Federal Grant Application (reading time -- twenty minutes) which describes the Operations Analysis Program in detail. This is a unique and innovative program which should be of great importance to our departments, and your usual fine cooperation is anticipated.

NEWS RELEASE, MONDAY, APRIL 10, 1972
FOR EMPLOYEE ORGANIZATION NEWSPAPERS, PERIODICALS,
BULLETINS, ETC.

The Chief Administrative Officer has received a Federal grant for an unusual training program to develop Operations Analysts. These Analysts will prepare work distribution and flow process charts, assist in improving methods and procedures and in developing work standards, etc., in departments under the C.A.O.

The monthly salary range will be \$911-\$1107. The unique part of the program is that applications will be accepted from any permanent employee in the C.A.O. departments with a high school education or equivalent, who has analytical ability, the ability to make accurate arithmetic computations and the ability to maintain effective working relations with others. Six successful applicants will be given an in-service training course of approximately six months, on City time, working as Operations Analysts, and will then qualify for a permanent promotional examination.

This is a pilot program, for C.A.O. departments, and if it is successful it may be extended to other City departments. Anyone in C.A.O. departments who is interested in this opportunity, is encouraged to get an Announcement and Application from his or her departmental personnel office.

Applications must be submitted to Civil Service, or postmarked, not later than April 21, 1972.

NEWS RELEASE, FRIDAY, JUNE 2, 1972
FOR EMPLOYEE ORGANIZATION NEWSPAPERS, PERIODICALS,
BULLETINS, ETC.

CITY SELECTS TEN EMPLOYEES FOR TRAINING
IN OPERATIONS ANALYSIS TECHNIQUES

Ten City employees have been selected for training as operations analysts in the City's new program to develop analyst capabilities. Analysts who successfully complete the training will be assigned to review and improve City operations and to develop staffing and budgeting data in departments under the Chief Administrative Officer.

More than 200 employees applied for the training, which will be conducted by PAR Technology, a Division of Booz-Allen & Hamilton, Inc. A written test measuring analytical ability was administered and those who scored well in the test (40 employees) were interviewed prior to the selection of the ten employees.

The selected employees have diverse backgrounds; medical orderly, storekeeper, auto serviceman and an accountant are representative occupations. Only three of the ten are college graduates. Formal classroom training begins on June 12th and several weeks later on-the-job training begins. The employees under the guidance of the consulting firm, will analyze specified organizational units.

The program therefore not only aims for improvement in operations, but in developing the skills of those individuals afforded the opportunity to participate in the program. Those selected for training are Lloyd Cubillos, Medical Orderly; Lourdes Cunanan, Senior Clerk; Patrick Gibbons, Auto Serviceman; James P. Horan, Inspector of Weights & Measures; Ceasar I. Ibe, Management Assistant; Garret Lillethun, Storekeeper; Carol J. Morgan, Account Clerk; Dorothy L. Owen, Senior Clerk Typist; Darrell R. Spencer, Accountant; and George J. Suter, Management Assistant.

The analysts will work out of the office of the Chief Administrative Officer, under the direction of Tom Miller, Executive Assistant to the Chief Administrative Officer, assisted by Gilbert Boreman, Management Analyst.

APPENDIX C

CONTENTS OF ANALYST TRAINING MANUAL

APPENDIX C
CONTENTS OF ANALYST TRAINING MANUAL

OPERATIONS ANALYSIS PROGRAM

- | | | |
|----------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| PART I | - | <u>Program Introduction and Philosophy</u> |
| | | Outlines the basic objectives and the overall framework of the Operations Analysis Program. |
| PART II | - | <u>Work Description</u> |
| | | Discusses the techniques used in identifying and describing work in meaningful terms. |
| PART III | - | <u>Analysis</u> |
| | | Describes the means by which work is broken into its components and subjected to searching analysis for the purpose of eliminating and simplifying. |
| PART IV | - | <u>Measurement</u> |
| | | Outlines the techniques and procedures employed for measurement and for establishing standards. |
| PART V | - | <u>Installation and Continuing Control</u> |
| | | Describes the procedures for installing the program to improve area operations and achieving and maintaining reduced costs. |
| APPENDIX | - | <u>Predetermined Motion Time Values</u> |
| | | This manual is a catalog of the time values required to perform various motions and is used in the measurement phase of the program. |

APPENDIX D
ANALYST NAMES AND BACKGROUNDS

APPENDIX D
ANALYST NAMES AND BACKGROUNDS

NAME	PRIOR JOBS WITH THE CITY			EDUCATION
	TITLE	YEARS		
Lloyd Cubillos	Medical Orderly, San Francisco General Hospital	1968 - 1972		1.5 Years of College
Lourdes B. Cunanan	Billing Supv., Limited Tenure, Dept. Public Health Senior Clerk, Dept. Public Health Chief Clerk, Dept. Public Health Senior Clerk, Dept. Public Health Clerk, Civil Service	1972 - 1972 1971 - 1972 1969 - 1971 1968 - 1969 1967 - 1968		36 Semester Units
Patrick Gibbons	Auto Serviceman	1966 - 1972		AA Degree, Going to San Francisco State University
James P. Horan	Inspector, Weights and Measures	1967 - 1972		BA Political Science
Cesar I. Ibe	Management Assistant	1971 - 1972		BS in Civil Engineering, University of Philippines MBA in Business Administration, University of Philippines
Carol J. Morgan	Senior Accounting Machine Operator Limited Tenure Account Clerk Keypunch Operator	1971 - 1972 1966 - 1971 1963 - 1966		One Semester of College

APPENDIX E

WORK SCHEDULE FOR A TYPICAL PROGRAM AREA

APPENDIX E

WORK SCHEDULE FOR A TYPICAL PROGRAM AREA

BILLING UNIT SCHEDULE--OPERATIONS ANALYSIS PROGRAM

STUDY STEPS	WEEK ENDING												DECEMBER					
	JUNE	JULY	AUGUST	SEPTEMBER			OCTOBER	NOVEMBER			10	17	24	1	8	15	22	
20 7	14 21	20 26	4 11	18 25	1	8 15	22	20 6	13 20	27	3	10	17	24	1	8	15	22

ORIENTATION

WORK DISTRIBUTION

FLOW CHARTS

IMPROVEMENTS

TIME MEASUREMENT

REPORTING SYSTEM

MONITORING

APPENDIX F

POTENTIAL ANNUAL DOLLAR SAVINGS FROM METHODS IMPROVEMENTS

APPENDIX F (1)
POTENTIAL ANNUAL DOLLAR
SAVINGS FROM METHODS IMPROVEMENTS

<u>PROGRAM AREA</u>	<u>TITLE OF METHODS IMPROVEMENTS</u>	<u>TOTAL ANNUAL SAVINGS</u>	<u>SERVICE IMPROVEMENTS</u>
Purchasing Department			
Billing Unit	<ul style="list-style-type: none"> • Establish a structured filing system and process discounts on a priority system. • Supplement the general job description for the billing unit supervisor with a list of specific job duties. 	\$12,500	<ul style="list-style-type: none"> • Faster processing of vendor invoices. • Not easily measurable.
Finance and Recorder's Department			
Recorder's Office	<ul style="list-style-type: none"> • Modify procedure for renting space. • Update microfilming system. • Revise reference and reproduction system. • Simplify "Preparation of Envelopes for Return of Recorded Documents" process. • Relocate marriage records desk. 	\$4,500	<ul style="list-style-type: none"> • Time and processing savings will be used to pay for equipment. • Several hundred. • Several hundred. • Reduced search time (as yet not fully determined).
	<ul style="list-style-type: none"> • Convert manual indexing to computerized indexing. • Simplify records keeping at mail desk. • Simplify book and page stamping procedure. 	\$14,000 (After 2 years)	<ul style="list-style-type: none"> • Not easily measurable. • Several hundred.

PROGRAM AREA	TITLE OF METHODS IMPROVEMENTS	TOTAL ANNUAL SAVINGS	SERVICE IMPROVEMENTS
Public Health Department			
- Laundry	Modify linen distribution procedures.	\$30,200	Uniform availability of linen to aged patients.
Laguna Honda Hospital	Modify outdoor linen transportation procedures.	\$16,200	
- Admitting Office, San Francisco General Hospital.	<ul style="list-style-type: none"> • Use hospital security officer to control entry into the Linen room during non-day shift hours. • Forward "available" Medi-Cal number to the Medi-Cal billing unit and avoid duplicate billing. • Notify the billing unit of a delay in submission of Blue Cross billing forms. • Modify procedure for processing diagnosis, • Request proof of patient identity and address, • Advise refuse and linen employees to use basement hallway. 	<ul style="list-style-type: none"> • Eliminate possibility of theft. • Several hundred. • \$25,000 • Not easily measurable. • \$25,000 • - 	<ul style="list-style-type: none"> • Eliminate unnecessary billing of patients. • Hospital will receive increased revenue from Medi-Cal. • Faster processing of Medi-Cal claims. • All patients treated more equally and fairly. • Patients at Triage and Admitting will not be exposed to unsightly and unsafe items. • Hospital will receive increased revenue from Medi-Cal.
- Medi-Cal Billing Unit, San Francisco General Hospital.	Increase Medi-Cal reimbursements and collections through modification of organization and procedures.	\$800,000	
Public Works Department			
- Federally Assisted Code Enforcement (FACE) Field Offices	Standardize clerical, supervision and organizational procedures in the three field offices, Property Conservation Division		<ul style="list-style-type: none"> • Not easily measurable.
		TOTAL	\$927,400

APPENDIX G

POTENTIAL ANNUAL DOLLAR SAVINGS FROM INCREASED MANPOWER UTILIZATION

APPENDIX G
POTENTIAL ANNUAL DOLLAR
SAVINGS FROM INCREASED MANPOWER UTILIZATION

PROGRAM AREA	Number of Employees Normally Available for Work	Base Manpower Utilization In Percent ⁽¹⁾	Savings From Increasing Manpower Utilization to 100% ⁽²⁾
Purchasing Department			
- Billing Unit	7	63%	\$ 20,400
Finance and Records Department			
- Recorder's Office	20	78	55,000
Public Health Department			
- Laundry, Laguna Honda Hospital	30	58	118,800
- Admitting, San Francisco General Hospital	12	63	66,400
- Medi-Cal Billing Unit, San Francisco General Hospital	19	55 ⁽²⁾	85,000
Public Works Department			
- Federally Assisted Code Enforcement (FACE) Field Offices, Property Conservation Division	45	(3)	(3)
TOTALS	133		\$345,600

¹ Manpower utilization in effect at the beginning of the program. Computed by comparing actual hours to standard hours (work completed extended by the time for completion as determined during the program).

² Base utilization is lower than expected because of Medi-Cal procedure changes.

³ Analysis not yet completed.

